

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

## In Re Application of:

Peter W. Heuell; Garry M. Loy;  
Russell C. Broome; Lars Anders Linqvist

Group Art Unit:  
Not Yet Assigned

Examiner: Not Yet Assigned

For: **ADVANCED INSTRUMENT  
PACKAGING FOR ELECTRONIC ENERGY  
METER**

## DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name; and

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a

☒ Utility Patent      ☐ Design Patent

is sought on the invention, whose title appears above, the specification of which:

- ☐ is attached hereto.
- ☒ was filed on January 26, 2000 as Serial No. 09/490,992.
- ☐ said application having been amended on \_\_\_\_\_

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to be material to the patentability of this application in accordance with 37 CFR § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a-d) of any **foreign application(s)** for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of any application on which priority is claimed:

Priority Claimed (If X'd)	Country	Serial Number	Date Filed
<input type="checkbox"/>	_____	_____	_____
<input type="checkbox"/>	_____	_____	_____
<input type="checkbox"/>	_____	_____	_____
<input type="checkbox"/>	_____	_____	_____

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to be material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

Serial Number	Date Filed	Patented/Pending/Abandoned
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

Serial Number	Date Filed
_____	_____
_____	_____


I hereby appoint the following persons of the firm of **WOODCOCK WASHBURN KURTZ MACKIEWICZ & NORRIS LLP**, One Liberty Place - 46th Floor, Philadelphia, Pennsylvania 19103 as attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

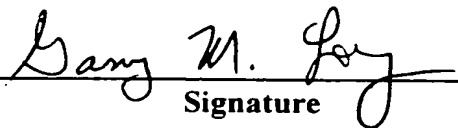
<u>Anthony J. Rossi</u>	Reg. No. <u>24,053</u>
<u>Norman L. Norris</u>	Reg. No. <u>24,196</u>
<u>Jonathan M. Waldman</u>	Reg. No. <u>40,861</u>

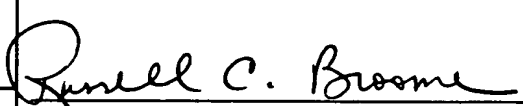
Address all telephone calls and correspondence to:


Anthony J. Rossi, Esq.  
**WOODCOCK WASHBURN KURTZ  
MACKIEWICZ & NORRIS LLP**  
One Liberty Place - 46th Floor  
Philadelphia PA 19103  
Telephone No.: (215) 568-3100  
Facsimile No.: (215) 568-3439

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

<b>Name:</b> <b>PETER W. HEUELL</b>	 Signature
<b>Mailing Address:</b> 1805 Farmington Grove Raleigh, North Carolina 27610	Date of Signature: <u>2/24/2000</u>
<b>City/State of Actual Residence:</b> Raleigh, North Carolina 27610	Citizenship: <u>Germany</u>

<b>Name:</b> <b>GARRY M. LOY</b>	 Signature
<b>Mailing Address:</b> 6008 Harvest Court Raleigh, North Carolina 27616	Date of Signature: <u>2/22/2000</u>
<b>City/State of Actual Residence:</b> Raleigh, North Carolina 27616	Citizenship: <u>USA</u>

<b>Name:</b> <b>RUSSELL C. BROOME</b>	 Signature
<b>Mailing Address:</b> 7028 Kristi Drive Garner, North Carolina 27529	Date of Signature: <u>2/22/2000</u>
<b>City/State of Actual Residence:</b> Garner, North Carolina 27529	Citizenship: <u>USA</u>

Name:  LARS ANDERS LINDQVIST	 Signature	
Mailing Address: V. Tradgardsgatan 17, 611 32 Nykoping, Sweden		Date of Signature: <u>29/2-2000</u>
City/State of Actual Residence:  611 32 Nykoping, Sweden		Citizenship: <u>Sweden</u>

**DOCKET NO.: ELSE-0825/B990064**

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**In Re Application of:**

**Peter W. Heuell; Garry M. Loy; Russell C. Confirmation No.: Not yet assigned**

**Broome; Lars Anders Lindqvist**

**Application No.: Not yet assigned**

**Group Art Unit: Not yet assigned**

**Filing Date: Herewith**

**Examiner: Not Yet Assigned**

**For: ADVANCED INSTRUMENT PACKAGING FOR ELECTRONIC ENERGY  
METER**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**ASSOCIATE POWER OF ATTORNEY**


The undersigned, of the firm WOODCOCK WASHBURN LLP, One Liberty Place - 46th Floor, Philadelphia, Pennsylvania 19103, Attorney(s) and/or Agents for Applicant(s), hereby appoints the following:



23377

his/her associates with full power to prosecute the above-identified application and to transact all business in the Patent Office connected therewith and requests that correspondence continue to be directed to the firm of WOODCOCK WASHBURN LLP at the above address.

Date: December 1, 2003

  
Jonathan M. Waldman  
Registration No. 40,861

Woodcock Washburn LLP  
One Liberty Place - 46th Floor  
Philadelphia PA 19103  
Telephone: (215) 568-3100  
Facsimile: (215) 568-3439

WOODCOCK WASHBURN KURTZ  
MACKIEWICZ & NOLAN LLP

ONE LIBERTY PLACE - 46TH FLOOR  
PHILADELPHIA, PA 19103

Royal Bank  
of Pennsylvania  
60-109/319

09/18/2003  
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HE DIRECTOR OF THE UNITED STATES  
ER PATENT AND TRADEMARK OFFICE



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RECEIVED BY THE UNITED STATES  
PATENT AND TRADEMARK OFFICE

Paper: Assignment to Elster Electricity, LLC with Addendum  
Check No. 128337 for \$680

Docket No.: ABME-0449 [to be recorded in 17 separate cases]  
Date Sent: October 7, 2003  
Sent By: S.Samuels/J.Calvo



**2. Name and address of receiving party(ies):**

Additional name(s) & address attached? ☐ YES ☒ NO

☐ Other:

**Mail Stop Assignment Recordation Services**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, VA 22313-1450**



<b>Application No.</b>	<b>Attorney Docket No.</b>
08/478,606	ABME-0452
09/022,879	ABME-0247
09/174,720	ABME-0529
09/798,084	ABME-0681
09/792,179	ABME-0685
10/229,778	ABME-0802

<b>Patent No.</b>	<b>Attorney Docket No.</b>
D412,859	ABME-0480
6,363,057	ABME-0686
6,374,188	ABME-0457
6,386,790	ABME-0693
6,396,839	ABME-0248
6,470,083	ABME-0244
6,476,595	ABME-0623
6,483,290	ABME-0295
6,504,357	ABME-0294
6,507,794	ABME-0498
6,577,961	ABME-0499

## ASSIGNMENT

WHEREAS, ABB Inc., hereinafter referred to as the ASSIGNOR, a company organized and existing under the laws of the State of Delaware, having its principal place of business at 501 Merritt 7, Norwalk, CT 06856 is the owner of certain inventions or improvements for which applications for Letters Patent have been made or for which Letters Patent have been issued, all of which are listed on Attachment A hereto (hereafter Patent Property); and

WHEREAS, pursuant to an Asset Sale and Purchase Agreement having an effective date of December 4, 2002, ASSIGNOR has sold, assigned and transferred to Elster Electricity, LLC, hereinafter referred to as the ASSIGNEE, a limited liability company organized and existing under the laws of the State of Delaware, having its principal place of business at c/o American Meter Company, 300 Welsh Road, Building One, Horsham, PA 19044, all of ASSIGNOR's right, title and interest in and to certain intellectual property which includes the Patent Property;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over to said ASSIGNEE, the entire right, title and interest in and to said Patent Property and any and all continuations, divisions and renewals of and substitutes for said Patent Property and to and under any and all additional Letters Patent which may be granted on or as a result thereof in the United States and any and all other countries, and any reissue or reissues or extension or extensions of said Letters Patent, and the full right to sue for and recover all profits and damages recoverable for past infringement of the same, and assign to and authorize said ASSIGNEE to file applications for Letters Patent in all countries, to be held and enjoyed by said ASSIGNEE, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by ASSIGNOR had this assignment, sale and transfer not been made.

It is hereby covenanted that ASSIGNOR has good and valid title to the Patent Property and the same is free and clear of any and all liens and encumbrances, and ASSIGNOR further covenants and agrees that it will each time request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said Patent Property in said ASSIGNEE, and ASSIGNOR agrees to communicate to said ASSIGNEE all known facts respecting said Patent Property, to sign all lawful papers to execute all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful oaths, and generally to take such other actions as said ASSIGNEE may deem reasonably necessary to aid said ASSIGNEE, to obtain and enforce for its or their own benefit proper patent protection for said inventions or improvements in any and all countries, all at the expense, however, of said ASSIGNEE.

AND ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to said ASSIGNEE, as assignee of the entire right, title and interest, any and all Letters Patent for Patent property, including any and all Letters Patent of the United States which may be issued and granted on or as a result of any applications included in said Patent Property, in accordance with the terms of this assignment.

IN WITNESS WHEREOF, the undersigned, being properly authorized to execute this Assignment, hereunto sets their hand and seal.

ABB INC.

By: [Signature]  
(Name)

Its: [Signature]  
(Title)

Date: 3/12/03

STATE OF CONNECTICUT

:  
: SS NRARA

COUNTY OF FAIRFIELD

On this 12<sup>th</sup> day of MARCH, year of 2003, before me, the undersigned officer, personally appeared EUGENE E. MADARA, who acknowledged himself/herself to be the VICE PRESIDENT of ABB Inc., a corporation, and that he/she as such VICE PRESIDENT, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself/herself as VICE PRESIDENT.

[Signature]  
Notary Public

GAIL D. MORGAN

NOTARY PUBLIC

My Commission Expires Sept. 30, 2003

**ATTACHMENT A**  
**See the attached spreadsheet**

ADDENDUM

WHEREAS, on March 12, 2003, **ABB Inc.**, hereinafter referred to as the ASSIGNOR, a company organized and existing under the laws of the **State of Delaware**, having its principal place of business at **501 Merritt 7, Norwalk, CT 06856** executed the preceding Assignment of all its right, title and interest in and to certain inventions or improvements for which applications for Letters Patent were made and for which Letters Patent have issued, all of which were identified on a spreadsheet attached thereto as Attachment A and dated January 29, 2003 (hereinafter "Patent Properties"), to **Elster Electricity, LLC**, hereinafter referred to as the ASSIGNEE, a limited liability company organized and existing under the laws of the **State of Delaware**, having its principal place of business at **c/o American Meter Company, 300 Welsh Road, Building One, Horsham, PA 19044**; and

WHEREAS, the parties have discovered that due to the formatting of the printout of the spreadsheet originally attached to the Assignment, some of the information in the columns of the spreadsheet did not print fully and completely; and

WHEREAS, ASSIGNOR and ASSIGNEE desire to have the information in all columns of the attached spreadsheet printed fully and completely;

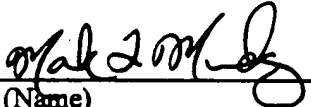
NOW, THEREFORE, ASSIGNOR AND ASSIGNEE hereby agree to substitute the attached printout of the spreadsheet dated January 29, 2003 with the printout originally attached to the Assignment.

IN WITNESS WHEREOF, the undersigned, being properly authorized to execute this Addendum on behalf of ASSIGNOR and ASSIGNEE, hereunto sets their hands and seal.

**ABB Inc.**

**Elster Electricity LLC**

By:   
(Name)

By:   
(Name)

Its:   
(Title)

Its: President & CEO  
(Title)

Date: 8/23/03

Date: Oct 1, 2003

ABB Inc. Electricity Metering Patent Portfolio Assigned to Elster Electricity, LLC

Land	Docket	Title	Filed	Serial No.	Issued	Patent No.
US	B900257	Electronic Meter With Oversampling AD's and a Programmable DSP	06-Jun-96	658326	20-May-97	5631843
US	B900252	Programmable Electrical Energy Meter Utilizing a Non-Volatile Memory	07-Jun-95	484789	20-Aug-96	5548527
US	B900256	Electronic Meter With Oversampling AD's and a Programmable DSP	27-Sep-95	534693	10-Sep-96	5555508
US	B900263	Method for Providing Optical Test Signals For Electronic Meter Testing	07-Jun-95	08478608		
US	B900268	Electronic Meter Testing Using Optical Communications	07-Jun-95	08479013		
US	B900269	Method and Apparatus for Electronic Metering Testing	06-Jun-96	084660709		
US	B900268	Apparatus for Metering Electrical Power and Electronically Communicating...	09/04/8800	09/04/8800	07-Jan-03	6504357
US	B90026C	Apparatus for Metering Electrical Power That Determines Energy Usage Data Based...	28-Mar-98	09/04/8812	19-Nov-02	6483290
US	B900272	Switching Power Supply Having Voltage Blocking Clamp	03-Feb-95	08/384398	10-Oct-95	5457621
US	B900273	Switching Power Supply for Use in an Electronic Energy Meter Having a Wide Range of Input Voltages	07-Jun-95	08479137	15-Apr-97	5821828
US	B900274	Electrical Energy Meter Having Resistive Dividers for Providing Wide Range Voltage Capability	07-Jun-95	08475549		
US	B900278	Universal Electronic Energy Meter For Use With 4-Wire Standard Services	07-Jun-95	08478605	11-May-99	5903145
US	B90027C	Electrical Energy Meter For 3-Wire Delta Service	07-Jun-95	08482005	01-Aug-00	6097182
US	B90027A	Apparatus for Metering at Least One Type of Electrical Power Over...	25-Mar-98	09/04/7479	08-May-01	6229295
US	B960477	System and Method for Automatically Determining the Electrical Energy Service Type...	30-Nov-98	201292	25-Jul-00	6094622
US	B960474	Energy Meter With Power Quality Monitoring Systems and Methods	30-Nov-98	09/201440	14-Jan-03	6507794
US	B960473	Energy Meter With Instrumentation Systems and Methods	30-Nov-98	201439	18-Apr-02	6374188
US	B960476	System and Method for Detecting Flicker in an Electrical Energy Supply	30-Nov-98	09/201294	31-Jul-01	6269316
US	B960475	Energy Meter Having Programmable Functions	30-Nov-98	201610		
US	B970180	Broadcast Technology for an Automatic Meter Reading System	08-Apr-97	08/835281	06-Jun-00	6073169
US	B970210	Remote Access to Electronic Meters Using a TCP/IP Protocol Suite	12-Feb-98	09/022718	28-May-02	6396839
US	B970221	Remote Access to Electronic Meters Using the Short Message Service (SMS)	12-Feb-98	09/022879		
US	B970471	Automatic Meter Reading System	21-May-98	09/082847	11-Jul-00	6088659
US	B970560	Telecommunication Off-Hook and Intrusion Detection Method and Apparatus	24-Dec-97	08/898166	22-Oct-02	6470083
US	B980020	Stackable Plastic Cover For Use On Electrical Meters	24-Jun-98	09/104071	04-Jul-00	6084395
US	B980141	Wireless Area Network Communications Module for Utility Meters	28-Apr-99	9906006		
CA	B980140	Wireless Area Network Communications Module for Utility Meters	13-Jul-01	2330643		
US	B980142	Wireless Area Network Communications Module for Utility Meters	13-Jul-01	09/805145		
US	B980251	Apparatus and Method for Detecting Tampering in a Multiphase Meter	13-Jul-01	09/805145		
US	B990061	Advanced Instrument Packaging For Electronic Energy Meter	28-Apr-99	2330643		
BR	B990061	Advanced Instrument Packaging For Electronic Energy Meter	28-Apr-99	2330643		
ER	B990061	Advanced Instrument Packaging For Electronic Energy Meter	28-Apr-99	2330643		
RJ	B990061	Advanced Instrument Packaging For Electronic Energy Meter	28-Apr-99	2330643		
US	B990063	Advanced Instrument Packaging For Electronic Energy Meter	28-Apr-99	2330643		
US	B990470	A One-Piece Stainless Steel Rim For Making a Meter Cover and Base and Method of Making Same	28-Apr-99	2330643		
WQ	PCT	One Piece Stainless Steel Rim and Method of Making the Same	28-Apr-99	2330643		
CA	PCT	One Piece Stainless Steel Rim and Method of Making the Same	28-Apr-99	2330643		
CA	B980580	Architecture Layer Interfacing Devices and Applications	28-Apr-99	2330643		
ER	B980580	Architecture Layer Interfacing Devices and Applications	28-Apr-99	2330643		
US	B980581	Architecture Layer Interfacing Devices and Applications	28-Apr-99	2330643		
AJ	B543620	Electronic Watt-Hour Meter With Combined Multiplier/Integrator Circuit	28-Apr-99	2330643		
US	B990160	Network-Enabled, Extensible Metering System	28-Apr-99	2330643		
US	B980240	Two-Element Energy Meter Having Systems For Automatic Service Type Detection	28-Apr-99	2330643		
CA	B980240	Two-Element Energy Meter Having Systems For Automatic Service Type Detection	28-Apr-99	2330643		

ABB Inc. Electricity Metering Patent Portfolio Assigned to Elster Electricity, LLC

Lang	Docket	Title	Filed	Serial No.	Issued	Patent No.
US	B960270	Communications Module Based Repeater	31-Mar-97	828539	02-Nov-99	5978371
US	B960291	Methods and Apparatus for Oscillator Compensation in an Electrical Energy Meter	22-Oct-96	735164	21-Dec-99	6005384
CA	B970760	Method and Apparatus for Detecting and Reporting a Power Outage	21-Dec-98	2304250		
US	B970761	Method and Apparatus for Detecting and Reporting a Power Outage	23-May-00	09/508219		
MX	B970761	Method and Apparatus for Detecting and Reporting a Power Outage	21-Dec-98	006134		
US	B980150	Voltage Coil and Method for Making Same	21-Sep-98	158012		
US	B980360	System and Method For Frequency Compensation in An Energy Meter	30-Nov-98	09/201640	03-Oct-00	6128584
US	B980470	Method and System For Improving Wireless Data Packet Delivery	19-Oct-98	174720		
US	B990650	System And Method For Digitally Compensating Frequency And Temperature...	26-Jan-00	09/491379		
AR	B990650	System And Method For Digitally Compensating Frequency And Temperature...	28-May-00	P000102592		
WQ	B990650	System And Method For Digitally Compensating Frequency And Temperature...	26-Jan-00	PCT/US00001663		
AR	B990650	System and Method for Digitally Compensating Frequency and Temperature Induced Errors...	02-Apr-02	P020101192		
BR	B990650	System and Method for Digitally Compensating Frequency and Temperature Induced Errors...	26-Jan-00	P00017072-0		
EP	B990650	System and Method for Digitally Compensating Frequency and Temperature...	26-Jan-00	00903407.5		
US	E20000020	Secure and Authorized Delivery of Metered and/or Energy Information Data via Untrusted Networks	23-Feb-01	09/792179		
US	E20000040	Automated On-Site Meter Registration Confirmation Using A Portable, Wireless Computing Device	24-Apr-02	10/128851		
US	E20000480	Mold for Component With In-Mold Decoration	31-Oct-01	09/998879		
US	E20010180	Electronic Meter With Enhanced Thermally Managed Communications Systems and Methods	13-Aug-02	10/217397		
US	E20020100	Data Collector for an Automated Meter Reading System	28-Jun-02	10/185074		
US	E20020110	Microprocessor Decoder Frequency Hopping Spread Spectrum Communications Receiver	27-Jun-02	10/185664		
US	E20020120	Dynamic Self-Configuring Metering Network	28-Jun-02	10/183930		
US	E20020130	Frequency Hopping Spread Spectrum Decoder	27-Jun-02	10/185678		
US	E20020070	Electrical-Energy Meter	02-Oct-02			
US	E20020170	Cover System For An Electrical-Energy Meter, And Process	28-Dec-01	10/034655		
US	E20000030	Access Control For Service Meter Data	02-Aug-01	09/921173		
US	E20000500	Method and Apparatus for Determining the Internal Impedance of a Distribution Transformer...	01-Aug-02	2396448		
CA	E20000500	Method and Apparatus for Determining the Internal Impedance of a Distribution Transformer...	31-Jul-02	007467		
MX	E20000500	Method and Apparatus for Determining the Internal Impedance of a Distribution Transformer...	21-Dec-01	10/037357		
US	E20010060	Frequency Hopping Spread Spectrum Communications System	02-Oct-05	782772	05-May-87	4663587
US	B508740	Electronic Circuit for Measuring Electrical Energy	18-Sep-86	62901186	18-Sep-86	579489
AU	B508740	Electronic Circuit for Measuring Electrical Energy	28-Sep-86	519229	06-Dec-88	1246147
CA	B508740	Electronic Circuit for Measuring Electrical Energy	28-Feb-84	584422	04-Nov-86	4621330
US	B514940	Time-of-Use-Meter With a Calendar of Cyclic Events	24-Sep-85	653630	25-Jul-89	4852030
CA	B514940	Time-of-Use-Meter With a Calendar of Cyclic Events	28-Aug-85	485254	16-Oct-90	1275304
ES	B514940	Time-of-Use-Meter With a Calendar of Cyclic Events	20-Sep-85	46868/85	16-Mar-90	590523
CH	B514940	Time-of-Use-Meter With a Calendar of Cyclic Events	24-Sep-85	547186	26-Nov-86	547186
DE	B514940	Time-of-Use-Meter With a Calendar of Cyclic Events	24-Sep-85	85306755.1	22-Jun-94	EP0176338
FR	B514940	Time-of-Use-Meter With a Calendar of Cyclic Events	24-Sep-85	EP0176338	22-Jun-94	P3587862.2
GB	B514940	Time-of-Use-Meter With a Calendar of Cyclic Events	24-Sep-85	85306755.1	22-Jun-94	EP0176338
US	B514950	Time-of-Use-Meter With a Calendar of Cyclic Events	05-Oct-84	657921	22-Jun-94	EP0176338
CA	B514950	Time-of-Use Meter With Demand Profile Capability	21-Jun-85	484607	31-Mar-87	4654588
US	B544080	Improved Mutual Inductance Current Transducer, Method of Making...	18-Mar-88	170173	07-Jun-88	1237776
MX	B544080	Improved Mutual Inductance Current Transducer, Method of Making...	09-Mar-89	15200	12-Dec-89	4887029
					08-Dec-92	165902

ABB Inc. Electricity Metering Patent Portfolio Assigned to Elster Electricity, LLC

Land	Docket	Title	Filed	Serial No.	Issued	Patent No.
AJ	B544080	Improved Mutual Inductance Current Transducer, Method of Making...	15-Mar-89	31359/89	10-Feb-92	613721
BB	B544080	Improved Mutual Inductance Current Transducer, Method of Making...	16-Mar-89	P18901201-1	31-Jan-95	P18901201
AB	B544080	Improved Mutual Inductance Current Transducer, Method of Making...	18-Mar-89	313438	31-Jan-94	245535
CA	B544080	Improved Mutual Inductance Current Transducer, Method of Making...	15-Feb-89	591138	12-Jan-93	1312654
U\$	B552170	Energy Meter	11-May-89	350268	16-Oct-90	4963820
AJ	B552170	Energy Meter	08-May-90	5485180	22-Jan-93	628546
MJ	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	29-Oct-92	9206230	27-Nov-95	180255
AJ	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	05-Nov-92	3130183	04-Jul-96	665385
BB	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	05-Nov-92	P19207088-4	11-Jan-00	P19207088
CA	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	05-Nov-92	2130433	18-Jul-00	2130433
CB	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	05-Nov-92	92925121.3	23-Sep-98	EP0671009
DE	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	05-Nov-92	92925121.3	23-Sep-98	69227128-7
E\$	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	05-Nov-92	92925121.3	23-Sep-98	EP0671009
FB	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	05-Nov-92	92925121.3	23-Sep-98	EP0671009
GB	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	05-Nov-92	92925121.3	23-Sep-98	EP0671009
IF	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	05-Nov-92	92925121.3	23-Sep-98	EP0671009
RU	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	05-Nov-92	92925121.3	23-Sep-98	EP0671009
UA	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	05-Nov-92	94039536	27-Feb-99	2126974
AB	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	05-Nov-92	94085722	05-Nov-92	
CH	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	27-Nov-92	323774	29-Dec-94	247446
EP	B900250	Programmable Electrical Energy Meter and Methods Therefore	19-Jan-93	93100884.8	10-Feb-01	67547
S\$	B900250	Programmable Electrical Energy Meter Using Multiplexed Analog-To-Digital Converters	05-Nov-92	98200809.6		
U\$	B900254	Method of Determining Power Measurements in an Electrical Energy Meter	08-Feb-99	99100527.4		
U\$	B900254	Method of Determining Power Measurements in an Electrical Energy Meter	07-Jun-95	475409	06-Aug-96	5544089
HK	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	07-Jun-95	477385	16-Jul-96	5537333
CA	B900250	Electronic Meter With Oversampling AD's and a Programmable DSP	08-Feb-99	99100527.4		
U\$	B900260	Enhanced Electronic Metering Testing	05-Nov-92	2286992		
AJ	B900260	Method and Apparatus for Electronic Meter Testing	21-Feb-92	839634	16-Jul-96	5537029
BB	B900260	Method and Apparatus for Electronic Meter Testing	05-Nov-92	3070092	29-Aug-97	675921
CA	B900260	Method and Apparatus for Electronic Meter Testing	05-Nov-92	P19207087-6	16-May-00	P19207087
CH	B900260	Method and Apparatus For Electronic Meter Testing	05-Nov-92	2130434	29-Aug-00	2130434
DE	B900260	Method and Apparatus for Electronic Meter Testing	05-Nov-92	92924369.9	29-Apr-98	EP06227083
E\$	B900260	Method and Apparatus for Electronic Meter Testing	05-Nov-92	92924369.9	29-Apr-98	DE69225335
FB	B900260	Method and Apparatus for Electronic Meter Testing	05-Nov-92	92924369.9	29-Apr-98	EP0627083
GB	B900260	Method and Apparatus for Electronic Meter Testing	05-Nov-92	92924369.9	29-Apr-98	EP0627083
IF	B900260	Method and Apparatus for Electronic Meter Testing	05-Nov-92	92924369.9	29-Apr-98	EP0627083
RU	B900260	Method and Apparatus for Electronic Meter Testing	05-Nov-92	92924369.9	29-Apr-98	EP0627083
UA	B900260	Enhanced Electronic Metering Testing	05-Nov-92	94038429	10-Aug-98	2117305
MJ	B900260	Method and Apparatus for Electrical Meter Testing	05-Nov-92	94085727	15-Mar-01	34450
AJ	B900260	Enhanced Electronic Metering Testing	11-Nov-92	9206458	14-Aug-96	182404
MJ	B900260	Enhanced Electronic Metering Testing	27-Nov-92	323775	27-Jul-98	252865
CH	B900260	Method and Apparatus for Electronic Meter	19-Jan-93	93100880.5	14-Apr-00	55591
AJ	B900260	Enhanced Electronic Metering Testing	25-Mar-97	1657397		689059
AJ	B900260	Method and Apparatus for Electronic Meter Testing	16-Jul-97	97202221.4	06-Jun-01	688711
DE	B900260	Enhanced Electronic Metering Testing	16-Jul-97	97202221.4	06-Jun-01	69231869-0



ABB Inc. Electricity Metering Patent Portfolio Assigned to Elster Electricity, LLC

Label	Docket	Title	Filed	Serial No.	Issued	Patent No.
ES	B900260	Method and Apparatus for Electronic Testing of Electricity Meters	16-Jul-97	97202221.4	06-Jun-01	0803741
FB	B900260	Method and Apparatus for Electronic Testing of Electricity Meters	16-Jul-97	97202221.4	06-Jun-01	0803741
GB	B900260	Method and Apparatus for Electronic Testing of Electricity Meters	16-Jul-97	97202221.4	06-Jun-01	0803741
IT	B900260	Method and Apparatus for Electronic Testing of Electricity Meters	16-Jul-97	97202221.4	06-Jun-01	0803741
CN	B900260	Enhanced Electronic Metering Testing	24-Nov-98	98122682.5		
EP	B900260	Enhanced Electronic Metering Testing	05-Nov-92	00113865.0		
CA	B900260	Method and Apparatus for Electronic Meter Testing	05-Nov-92	2287014		
HK	B900260	Enhanced Electronic Metering Testing	28-Mar-00	00101874.9		
US	B900270	Apparatus for Metering at Least One Type of Electrical Power Over a Predetermined...	12-Feb-01	09/781501		
US	B900270	Apparatus for Metering at Least One Type of Electrical Power Over a Predetermined...	15-Feb-02	10076990		
US	B900290	Method and Apparatus for Identification Electronic Meter Function Capabilities	18-Jun-01	716911	22-Dec-92	5173657
US	B960090	Mating Ring For A Meter Cover and Base Assembly	18-Jan-98	008690	28-Sep-99	5959243
CA	B960090	Mating Ring For A Meter Cover and Base Assembly	15-Jan-99	2259077		
CA	B960470	Energy Meter With Power Quality Monitoring and Diagnostic Systems	16-Oct-97	2269499		
EP	B960470	Energy Meter With Power Quality Monitoring and Diagnostic Systems	18-Oct-97	97910922.0		
AU	B960470	Energy Meter With Power Quality Monitoring and Diagnostic Systems	18-Oct-97	4818397		
BG	B960470	Energy Meter With Power Quality Monitoring and Diagnostic Systems	16-Oct-97	PI9712557-1		
MX	B960470	Energy Meter With Power Quality Monitoring and Diagnostic Systems	18-Oct-97	9903674		
CJ	B960470	Energy Meter With Power Quality Monitoring and Diagnostic Systems	18-Oct-97	97199051.4		
RQ	B960470	Energy Meter With Power Quality Monitoring and Diagnostic Systems	18-Oct-97	99-00454		
AQ	B960470	Energy Meter With Power Quality Monitoring and Diagnostic Systems	22-Oct-97	P970104878		
AU	B970141	Energy Meter With Multiple Protocols For Communication With Local and Wide Area Networks	22-Jun-01	54067701	13-Jul-99	5923269
US	B970160	Broadcast Technology for an Automatic Meter Reading System	07-Aug-97	908728		
US	B970161	Automatic Meter Reading System Employing Common Broadcast Command Channel	24-Mar-98	2233104		
US	B970170	Repeater for Automatic Meter Reading System	05-Jun-97	870840	23-Feb-99	5874903
CA	B970170	Repeater for Automatic Meter Reading System	02-Jun-98	2282695		
GB	B970170	Repeater for Automatic Meter Reading System	02-Jun-98	9927652.9		
IN	B970170	Repeater for Automatic Meter Reading System	03-Jun-98	982/CAL/98		
AQ	B970170	Repeater for Automatic Meter Reading System	05-Jun-98	P980102654		
CL	B970170	Repeater for Automatic Meter Reading System	08-Jun-98	1267/98		
AQ	B970210	Electronic Metering System	12-Feb-98	P980100644		
AU	B970210	Remote Access to Electronic Meters Using a TCP/IP Protocol Suite	09-Mar-98	64534/98		
BQ	B970210	Remote Access to Electronic Meters Using a TCP/IP Protocol Suite	09-Mar-98	PI9815716-7		
CA	B970210	Remote Access to Electronic Meters Using a TCP/IP Protocol Suite	09-Mar-98	2322584		
EP	B970210	Remote Access to Electronic Meters Using a TCP/IP Protocol Suite	09-Mar-98	98910243.9		
KR	B970210	Remote Access to Electronic Meters Using a TCP/IP Protocol Suite	09-Mar-98	2000-7009987		
MX	B970210	Remote Access to Electronic Meters Using a TCP/IP Protocol Suite	09-Mar-98	0008802		
NG	B970210	Remote Access to Electronic Meters Using a TCP/IP Protocol Suite	09-Mar-98	20004486		
PL	B970210	Remote Access to Electronic Meters Using a TCP/IP Protocol Suite	09-Mar-98	P344080		
RQ	B970210	Remote Access to Electronic Meters Using a TCP/IP Protocol Suite	09-Mar-98	PCT/US98/04539		
US	B970210	Remote Access to Electronic Meters Using a TCP/IP Protocol Suite	09-Mar-98	a/2000-00896		
HK	B970212	Remote Access to Electronic Meters Using a TCP/IP Protocol Suite	31-May-00	09/583506	26-Mar-02	6363057
US	B970210	Remote Access to Electronic Meters Using a TCP/IP Protocol Suite	06-Jun-01	01103899.5		
US	B970214	Remote Access to Electronic Meters Using a TCP/IP Protocol Suite	10-Oct-01	09/975582		

ABB Inc. Electricity Metering Patent Portfolio Assigned to Elster Electricity, LLC

Land	Docket	Title	Filed	Serial No.	Issued	Patent No.
EP	8970470	Automatic Meter Reading System	11-Sep-88	88946867.1		
MX	8970470	Automatic Meter Reading System	11-Sep-88	0002496		
AU	8970470	Automatic Meter Reading System	11-Sep-88	PCT/AUS98/19034		
CA	8970470	Automatic Meter Reading System	11-Sep-88	2303064		
CA	8970560	Telecommunication Off-Hook and Intrusion Detection Method and Apparatus	21-Dec-88	2256805		
US	8970560	Half-Wave Drive Circuit for Meter Disconnect Switch	03-Dec-87	984204	10-Nov-88	5835331
US	8970630	Electrical Energy Meter With Snap Fit Interlocking Parts	09-Feb-88	20787	12-Oct-89	5966010
CA	8970630	Electrical Energy Meter With Snap Fit Interlocking Parts	08-Feb-88	2261399		
CA	8980020	Stackable Plastic Cover	23-Jun-89	2276225		
MX	8980020	Stackable Plastic Cover	24-Jun-89	9906006		
US	8980021	Meter Cover	24-Jun-88	29089858	17-Aug-99	D412859
MX	8980021	Design for Meter Cover	09-Dec-88	981250	09-Aug-00	11701
CA	8980021	Meter Cover	16-Dec-88	1998-3050	30-Apr-99	86549
LB	8980250	Method and Apparatus For New Electric Meter Tamper Detection Using Apparatus...	12-May-99	88-01-0483597		
RU	8980250	Apparatus and Method For Detecting Tampering in A Multiphase Meter	14-May-89	2000126766		
SE	8980250	Apparatus and Method For Detecting Tampering in A Multiphase Meter	14-May-89	0004139-2		
HK	8980250	Apparatus and Method for Detecting Tampering in a Multiphase Meter	30-Oct-01	01107553.3		
US	8503610	Improved Coherent Phase Shift Keyed Demodulator for Power Line Communication Systems	09-Feb-83	465232	07-May-85	4516079
CA	8503610	Apparatus for Transmitting and Receiving a Power Line Carrier Signal	09-Feb-84	447087	16-Nov-86	1214227
CA	8506370	Apparatus for transmitting and receiving a power line	23-Jan-85	472674	04-Apr-89	1252167
US	8506371	Power Line Communication Interference Preventing Circuit	02-Apr-87	35255	24-May-88	4746897
US	8509880	Power Line Communication Interference Preventing Circuit	17-Jun-86	875154	23-Aug-88	4766414
CH	8530980	Power Line Communication Interference Preventing Circuit	17-Jun-87	87305364.9	08-Jul-92	0251568
FR	8530980	Power Line Communication Interference Preventing Circuit	17-Jun-87	87305364.9	08-Jul-92	0251568
GB	8530980	Power Line Communication Interference Preventing Circuit	17-Jun-87	87305364.9	08-Jul-92	0251568
US	8553821	Automated Data Transmission System	06-Jan-82	815886	09-Mar-93	5193111
US	8910030	Method and Apparatus for Measuring and Unknown Voltage, and Power Meter Employing the Same	21-Feb-82	077839789	26-Oct-93	5256979
MX	8910030	Voltage Measurement With Resistor Divider of Unknown...	05-Nov-82	9206349	17-Aug-95	178237
AU	8910030	Method and Apparatus for Measuring Voltage	06-Nov-82	3128793	05-Sep-95	659259
BR	8910030	Method and Apparatus For Measuring Voltage	06-Nov-82	P19207089-2	16-May-00	P19207089
CA	8910030	Method and Apparatus for Measuring Voltage	06-Nov-82	2130093	28-Apr-98	2130093
CH	8910030	Method and Apparatus for Measuring Voltage	06-Nov-82	92825099.1	21-Jul-99	EP0627084
DE	8910030	Method and Apparatus for Measuring Voltage	06-Nov-82	92825099.1	21-Jul-99	EP0627084
ES	8910030	Voltage Measurement With Resistor Divider of Unknown...	06-Nov-82	92825099.1	21-Jul-99	EP0627084
FR	8910030	Voltage Measurement With Resistor Divider of Unknown...	06-Nov-82	92825099.1	21-Jul-99	EP0627084
GB	8910030	Voltage Measurement With Resistor Divider of Unknown...	06-Nov-82	92825099.1	21-Jul-99	EP0627084
IT	8910030	Voltage Measurement With Resistor Divider of Unknown...	06-Nov-82	92825099.1	21-Jul-99	EP0627084
CN	8910030	Voltage Measurement With Resistor Divider of Unknown...	06-Nov-82	92825099.1	21-Jul-99	EP0627084
RU	8910030	Voltage Measurement With Resistor Divider of Unknown...	06-Nov-82	92825099.1	21-Jul-99	EP0627084
UK	8910030	Voltage Measurement With Resistor Divider of Unknown...	06-Nov-82	92825099.1	21-Jul-99	EP0627084
HK	8910030	Voltage Measurement With Resistor Divider of Unknown...	06-Nov-82	92825099.1	21-Jul-99	EP0627084
AR	8910030	Voltage Measurement With Resistor Divider of Unknown...	06-Nov-82	92825099.1	21-Jul-99	EP0627084
US	8960211	Current Measurement Methods and Apparatus Employing Second Harmonic Scaling	27-Nov-92	323776	30-Nov-98	252892
CA	8960211	Current Measurement Methods and Apparatus Employing Second Harmonic Scaling	07-Aug-87	908208	25-May-99	5907241
BR	8960210	Current Measurement Methods and Apparatus Employing Second Harmonic Scaling	27-Aug-87	2265863		
	8960210	Current Measurement Methods and Apparatus Employing Second Harmonic Scaling	27-Aug-97	P19711465-0		

ABB Inc. Electricity Metering Patent Portfolio Assigned to Elster Electricity, LLC

Land	Docket	Title	Filed	Serial No.	Issued	Patent No.
MX	B960210	Current Measurement Methods and Apparatus Employing Second Harmonic Scaling	27-Aug-97	9902283		
CA	B960270	Communications Module Based Responder	28-Mar-98	2285334		
CA	B960291	Electrical Energy Meter Oscillator Compensation	01-Oct-97	2289888		
BR	B960291	Electrical Energy Meter Oscillator Compensation	01-Oct-97	P19712559-8		
CN	B960291	Electrical Energy Meter Oscillator Compensation	01-Oct-97	97199050.6		
KR	B960291	Electrical Energy Meter Oscillator Compensation	01-Oct-97	10-1999-7003524		
AR	B960291	Methods and Apparatus for Oscillator Compensation in an Electrical Energy Meter	22-Oct-97	P970104877	17-Oct-01	AR008893B1
US	B970200	Methods and Apparatus for Oscillator Compensation in an Electrical Energy Meter	03-May-00	00102672.1		
US	B970420	Apparatus and Method to Detect Tampering With An Electronic Utility Meter	06-Sep-97	925542	17-Aug-99	5940009
CA	B970711	Mapping Interface for a Distributed Server to Translate Between Disimilar File Formats	21-May-98	82758	06-Mar-01	6199068
BR	B970711	System and Method for Detecting Voltage and Current Imbalance in an Electrical Energy Supply	18-Nov-98	P19814259-3		
CA	B970711	System and Method for Detecting Voltage and Current Imbalance in an Electrical Energy Supply	18-Nov-98	2312723	25-Jun-02	2312723
MX	B970711	System and Method for Detecting Voltage and Current Imbalance in an Electrical Energy Supply	18-Nov-98	0005533		
RQ	B970711	System and Method for Detecting Voltage and Current Imbalance in an Electrical Energy Supply	18-Nov-98	a/2000-00577		
US	B970711	System and Method for Detecting Voltage and Current Imbalance in an Electrical Energy Supply	18-Nov-98	2000114633		
RU	B970711	System and Method for Detecting Voltage and Current Imbalance in an Electrical Energy Supply	18-Nov-98	09555553	12-Jun-01	6246332
US	B980360	System and Method For Frequency Compensation in An Energy Meter	19-Oct-99	1210400		
BR	B980360	System and Method For Frequency Compensation in An Energy Meter	19-Oct-99	P19918148-6		
CA	B980360	System and Method For Frequency Compensation in An Energy Meter	19-Oct-99	2344425		
ER	B980360	System and Method For Frequency Compensation in An Energy Meter	19-Oct-99	99973141.7		
DE	B980360	System and Method For Frequency Compensation in An Energy Meter	19-Oct-99	19983488.1		
KR	B980360	System and Method For Frequency Compensation in An Energy Meter	19-Oct-99	2000-7014173		
MX	B980360	System and Method For Frequency Compensation in An Energy Meter	19-Oct-99	2001001895		
RQ	B980360	System and Method For Frequency Compensation in An Energy Meter	19-Oct-99	a/2001-00373		
RU	B980360	System and Method For Frequency Compensation in An Energy Meter	19-Oct-99	2001108386		
GB	B980360	System and Method For Frequency Compensation in An Energy Meter	19-Oct-99	PCT/US9924325		
US	B524550	Switch Bypass Circuit For Power Line Communications Systems	14-Aug-85	08/765470	11-Aug-87	4686382

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MACKIEWICZ & NORRIS LLP**  
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Paper: Certificate of Merger [ABB Automation Inc. into ABB Inc.]  
Check No. 128336

**Docket No.:** ABME-0449 [to be recorded in 17 separate cases]  
**Date Sent:** October 7, 2003  
**Sent By:** S.Samuels/J.Calvo



RECORDATION FORM COVER SHEET  
PATENTS ONLY ABME-0449

To The Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.

<p>1. Name of conveying party(ies):</p> <p><b>ABB Automation Inc.</b>                      <b>October 31, 2001</b>  First Assignor                                      Date of Execution</p> <p>Second Assignor                                      Date of Execution</p> <p>Third Assignor                                      Date of Execution</p> <p>Fourth Assignor                                      Date of Execution</p> <p>Fifth Assignor                                      Date of Execution</p> <p>Sixth Assignor                                      Date of Execution</p> <p>Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>	<p>2. Name and address of receiving party(ies):</p> <p>Name: <b>ABB Inc.</b></p> <p>Street Address: 501 Merritt 7</p> <p>City: Norwalk</p> <p>State Connecticut                                      ZIP 06856</p> <p>Additional name(s) &amp; address attached? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>3. Nature of Conveyance (check only one):</p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> New Assignment</td> <td><input checked="" type="checkbox"/> <b>Merger</b></td> </tr> <tr> <td><input type="checkbox"/> License Agreement</td> <td><input type="checkbox"/> Security Agreement</td> </tr> <tr> <td><input type="checkbox"/> Change of Name</td> <td><input type="checkbox"/> Other:</td> </tr> </table>	<input type="checkbox"/> New Assignment	<input checked="" type="checkbox"/> <b>Merger</b>	<input type="checkbox"/> License Agreement	<input type="checkbox"/> Security Agreement	<input type="checkbox"/> Change of Name	<input type="checkbox"/> Other:
<input type="checkbox"/> New Assignment	<input checked="" type="checkbox"/> <b>Merger</b>						
<input type="checkbox"/> License Agreement	<input type="checkbox"/> Security Agreement						
<input type="checkbox"/> Change of Name	<input type="checkbox"/> Other:						

4. Identification of Application number(s), patent number(s) OR date of execution of application to which assignment refers:		
Application Nos.: See Attached List	Patent Nos.: See Attached List	Date application was signed by the first named executing inventor
(Fill-in this date only if assignment is filed together with a new application)		

<p>5. Name and address of party to whom correspondence concerning documents should be mailed:</p> <p>Name: <b>Steven B. Samuels, Esq.</b>  <b>WOODCOCK WASHBURN LLP</b>  One Liberty Place - 46th Floor  Philadelphia, Pennsylvania 19103-7301  215-568-3100</p>	<p>6. Total number of applications and patents involved: <u>17</u></p> <p>7. Total fee (37 CFR 3.41):    <b>\$680.00</b>  <input checked="" type="checkbox"/> <b>Enclosed</b>  <input type="checkbox"/> Authorized to be charged to Deposit Account Number 23-3050</p> <p>8. Please charge any deficiency or credit any overpayment to Deposit Account Number 23-3050</p>
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9. Statement and signature.  
*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Steven B. Samuels/Reg. No. 37,711		10/7/03
Name of Person Signing/Reg. No.	Signature	Date

Total number of pages including cover sheet, assignment document and additional pages attached thereto: 10

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Alexandria, VA 22313-1450

<b>Application No.</b>	<b>Attorney Docket No.</b>
08/478,606	ABME-0452
09/022,879	ABME-0247
09/174,720	ABME-0529
09/798,084	ABME-0681
09/792,179	ABME-0685
10/229,778	ABME-0802

<b>Patent No.</b>	<b>Attorney Docket No.</b>
D412,859	ABME-0480
6,363,057	ABME-0686
6,374,188	ABME-0457
6,386,790	ABME-0693
6,396,839	ABME-0248
6,470,083	ABME-0244
6,476,595	ABME-0623
6,483,290	ABME-0295
6,504,357	ABME-0294
6,507,794	ABME-0498
6,577,961	ABME-0499

State of Delaware  
Office of the Secretary of State PAGE 1

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF MERGER, WHICH MERGES:

"ABB AUTOMATION INC.", A OHIO CORPORATION,  
WITH AND INTO "ABB INC." UNDER THE NAME OF "ABB INC.", A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED IN THIS OFFICE THE EIGHTE DAY OF NOVEMBER, A.D. 2001, AT 2 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF MERGER IS THE FIRST DAY OF JANUARY, A.D. 2002.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



*Harriet Smith Windsor*  
Harriet Smith Windsor, Secretary of State

0902559 6100X

010866732

AUTHENTICATION: 1437317

DATE: 11-09-01

# CERTIFICATE OF MERGER

ABB AUTOMATION INC.

INTO

ABB INC.

\*\*\*\*\*

The undersigned corporation DOES HEREBY CERTIFY:

**FIRST:** That the name and state of incorporation of each of the constituent corporations of the merger is as follows:

NAME	STATE OF INCORPORATION
ABB Automation Inc.	Ohio
ABB Inc.	Delaware

**SECOND:** That an Agreement of Merger between the parties to the merger has been approved, adopted, certified, executed and acknowledged by each of the constituent corporations in accordance with the requirements of section 252 of the General Corporation Law of Delaware.

**THIRD:** That the name of the surviving corporation of the merger is ABB Inc., a Delaware corporation.

**FOURTH:** That the Certificate of Incorporation of ABB Inc., a Delaware corporation which is surviving the merger, shall be the Certificate of Incorporation of the surviving corporation.



**FIFTH:** That the executed Agreement of Merger is on file at an office of the surviving corporation, the address of which is 501 Meritt 7, Norwalk, Connecticut 06851.

**SIXTH:** That a copy of the Agreement of Merger will be furnished by the surviving corporation, on request and without cost, to any stockholder of any constituent corporation.

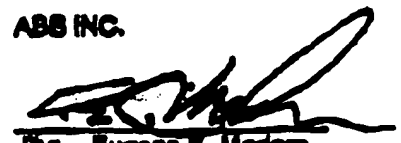
**SEVENTH:** The authorized capital stock of each foreign corporation which is a party to the merger is as follows:

Corporation	Class	Number of Shares	Par value per share or statement that shares are without par value
ABB Automation Inc.	Common	100	No Par Value

**EIGHTH:** That this Certificate of Merger shall be effective on January 1, 2002.

Dated: October 31, 2001

ABB INC.



By: Eugene E. Madara  
Vice President

101-28-2881 P. 83



Prescribed by **J. Kenneth Blackwell**

Please obtain fee amount and mailing instructions from the Filing Reference Guide (using the 3 digit form # located at the bottom of this form). To obtain the Filing Reference Guide or for assistance, please call Customer Service:

Central Ohio: (614) 466-3910 Toll Free: 1-877-808-FILE (1-877-767-3453)

Expedite is an additional fee of \$100.00  
☒ Expedite

## CERTIFICATE OF MERGER

In accordance with the requirements of Ohio law, the undersigned corporations, banks, savings banks, and loan, limited liability companies, limited partnerships and/or partnerships with limited liability, desiring to effect a merger, set forth the following facts:

### I. SURVIVING ENTITY

A. The name of the entity surviving the merger is:  
ARB DB Inc. (ARB Inc.)

B. Name Change: As a result of this merger, the name of the surviving entity has been changed to the following:  
N/A

(Complete only if name of surviving entity is changing through the merger)

C. The surviving entity is a: (Please check the appropriate box and fill in the appropriate blanks)

- ☐ Domestic (Ohio) for-profit corporation, charter number \_\_\_\_\_
- ☐ Domestic (Ohio) non-profit corporation, charter number \_\_\_\_\_
- ☒ Foreign (Non-Ohio) corporation incorporated under the laws of the state/country of Delaware and licensed to transact business in the State of Ohio under license number 567124
- ☐ Foreign (Non-Ohio) corporation incorporated under the laws of the state/country of \_\_\_\_\_ and NOT licensed to transact business in the state of Ohio, \_\_\_\_\_
- ☐ Domestic (Ohio) limited liability company, with registration number \_\_\_\_\_
- ☐ Foreign (Non-Ohio) limited liability company organized under the laws of the state/country of \_\_\_\_\_ and registered to do business in the State of Ohio under registration number \_\_\_\_\_
- ☐ Foreign (Non-Ohio) limited liability company organized under the laws of the state/country of \_\_\_\_\_ and NOT registered to do business in the State of Ohio, \_\_\_\_\_
- ☐ Domestic (Ohio) limited partnership, with registration number \_\_\_\_\_
- ☐ Foreign (Non-Ohio) limited partnership organized under the laws of the state/country of \_\_\_\_\_ and registered to do business in the state of Ohio under registration number \_\_\_\_\_
- ☐ Foreign (Non-Ohio) limited partnership organized under the laws of the state/country of \_\_\_\_\_ and NOT registered to do business in the state of Ohio, \_\_\_\_\_
- ☐ Domestic (Ohio) partnership having limited liability, with the registration number \_\_\_\_\_

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- ☐ Foreign (Non-Ohio) partnership having limited liability organized under the laws of the state/country of \_\_\_\_\_ and registered \_\_\_\_\_ do business in the state of Ohio under registration number \_\_\_\_\_
- ☐ Foreign (Non-Ohio) non-profit incorporation under the laws of the state/country of \_\_\_\_\_ and licensed to transact business in the state of Ohio under license number \_\_\_\_\_
- ☐ Foreign (Non-Ohio) non-profit incorporation under the laws of the state/country of \_\_\_\_\_ and not licensed to transact business in the state of Ohio.

**II. MERGING ENTITY**

The name, charter/license/registration number, type of entity, state/country of incorporation or organization, respectively, of which is a party to the merger are as follows: (If this is insufficient space to reflect all merging entities, please attach a separate sheet listing the merging entities.)

Name	State/Country of Organization	Type of Entity
<u>ABB Automation Inc. (Charter No. 316177)</u>	<u>Ohio</u>	<u>Corporation</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

**III. MERGER AGREEMENT ON FILE**

The name and mailing address of the person or entity from whom/which eligible persons may obtain a copy of the agreement of merger upon written request:

<u>Eugene R. Madara</u>	<u>501 Main St 7</u>
(name)	(street and number)
<u>Norwalk</u>	<u>CT</u>
(city, village or township)	(state)
	<u>06851</u>
	(zip code)

**IV. EFFECTIVE DATE OF MERGER**

This merger is to be effective on: January 1, 2003 (If a date is specified, the date must be a date on or after the date of filing; the effective date of the merger cannot be earlier than the date of filing. If no date is specified, the date of filing will be the effective date of the merger).

**V. MERGER AUTHORIZED**

The laws of the state or country under which each constituent entity exists, permits this merger.

This merger was adopted, approved and authorized by each of the constituent entities in compliance with the laws of the state under which it is organized, and the persons signing this certificate on behalf of each of the constituent entities are duly authorized to do so.

**VI. STATUTORY AGENT**

The name and address of the surviving entity's statutory agent upon whom any process, notice or demand may be served is:

<u>CT Corporation System</u>	<u>1300 East 9th Street</u>
(name)	(street and number)
<u>Cleveland</u>	<u>Ohio</u>
(city, village or township)	(state)
	<u>44114</u>
	(zip code)

(This form MUST be completed if the surviving entity is a foreign entity which is not licensed, registered or otherwise authorized to conduct business in the state of Ohio)

**VII. ACCEPTANCE OF AGENT**

The undersigned, named herein as the statutory agent for the above referenced surviving entity, hereby acknowledges and accepts the appointment of statutory agent for said entity.

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**VII. ACCEPTANCE OF AGENT**

The undersigned, named herein as the statutory agent for the above referenced surviving entity, hereby acknowledges and accepts the appointment of statutory agent for said entity.

Signature of Agent \_\_\_\_\_

*(The acceptance of agent must be completed by domestic surviving entities if through this merger the statutory agent for the surviving entity has changed, or the named agent differs in any way from the name currently on record with the Secretary of State.)*

**VIII. STATEMENT OF MERGER**

Upon filing, or upon such later date as specified herein, the merging entity/entities listed herein shall merge into the listed surviving entity

**IX. AMENDMENTS**

The articles of incorporation, articles of organization, certificate of limited partnership or registration of partnership having limited liability (circle appropriate term) of the surviving domestic entity have been amended. Please see attached "Exhibit A." (Please note, if there will be no change please state "no change")

**X. QUALIFICATION OR LICENSURE OF FOREIGN SURVIVING ENTITY**

- A. The listed surviving foreign corporation, bank, savings bank, savings and loan, limited liability company, limited partnership, or partnership having limited liability desires to transact business in Ohio as a foreign corporation, bank, savings bank, savings and loan, limited liability company, limited partnership, or partnership having limited liability, and hereby appoints the following as its statutory agent upon whom process, notice or demand against the entity may be served in the state of Ohio. The name and complete address of the statutory agent is:

\_\_\_\_\_  
(name) (street and number)  
\_\_\_\_\_, Ohio  
(city, village or township) (zip code)

The subject surviving foreign corporation, bank, savings bank, savings and loan, limited liability company, limited partnership, or partnership having limited liability irrevocably consents to service of process on the statutory agent listed above as long as the authority of the agent continues, and to service of process upon the Secretary of State of Ohio if the agent cannot be found, if the corporation, bank, savings bank, savings and loan, limited liability company, limited partnership, or partnership having limited liability fails to designate another agent when required to do so, or if the foreign corporation's, bank's, savings bank's, savings and loan's, limited liability company's, limited partnership's, or partnership having limited liability's license or registration to do business in Ohio expires or is canceled.

- B. The qualifying entity also states as follows: (Complete only if applicable.)

1. Foreign Notice Under Section 1703.031

(If the qualifying entity is a foreign bank, savings bank, or savings and loan, then the following information must be completed.)

- (a.) The name of the Foreign Nationally/Federally chartered bank, savings bank, or savings and loan association is

- (b.) The name(s) of any Trade Name(s) under which the corporation will conduct business:

\_\_\_\_\_  
\_\_\_\_\_

- (c.) The location of the main office (not Ohio) shall be:

\_\_\_\_\_  
(street address)  
\_\_\_\_\_  
(city, township, or village) (county) (state) (zip code)

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(d) - The principal office location in the state of Ohio shall be:

(street address)

(city, township, or village)

(county)

(state)

(zip code)

(Please note, if there will not be an office in the state of Ohio, please list none.)

(e) The corporation will exercise the following purpose(s) in the state of Ohio:

(Please provide a brief summary of the business to be conducted; a general clause is not sufficient)

## 2. Foreign Qualifying Limited Liability Company

(If the qualifying entity is a foreign limited liability company, the following information must be completed)

(a) The name of the limited liability company in its state of organization/registration is

(b) The name under which the limited liability company desires to transact business in Ohio is

(c) The limited liability company was organized or registered on \_\_\_\_\_  
under the laws of the state/country of \_\_\_\_\_

(d) The address to which interested persons may direct requests for copies of the articles of organization, operating agreement, bylaws, or other charter documents of the company is:

(street address)

(city, township, or village)

(state)

(zip code)

## 3. Foreign Qualifying Limited Partnership

(If the qualifying entity is a foreign limited partnership, the following information must be completed)

(a) The name of the limited partnership is

(b) The limited partnership was formed on \_\_\_\_\_

(c) The address of the office of the limited partnership in its state/country of organization is:

(street address)

(city, township, or village)

(county)

(state)

(zip code)

(d) The limited partnership's principal office address is:

(street address)

(city, township, or village)

(county)

(state)

(zip code)

(e) The names and business or residence addresses of the General partners of the partnership are as follows:

Name

Address

(If insufficient space to cover this item, please attach a separate sheet listing the general partners and their respective addresses)

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(f.) The address of the office where a list of the names and business or residence addresses of the limited partners and their respective capital contributions is to be maintained is:

\_\_\_\_\_  
(street address)  
\_\_\_\_\_  
(city, township, or village) \_\_\_\_\_ (county) \_\_\_\_\_ (state) \_\_\_\_\_ (zip code)

The limited partnership hereby certifies that it shall maintain said records until the registration of the limited partnership in Ohio is canceled or withdrawn.

**4. Foreign Qualifying Partnership Having Limited Liability**

(a.) The name of the partnership shall be

(b.) Please complete the following appropriate section (either item b(1) or b(2)):

(1.) The address of the partnership's principal office in Ohio is:

\_\_\_\_\_  
(street name and number)  
\_\_\_\_\_, Ohio \_\_\_\_\_  
(city, village or township) \_\_\_\_\_ (zip code)

(If the partnership does not have a principal office in Ohio, then items b2 and item c must be completed)

(2.) The address of the partnership's principal office (Non-Ohio):

\_\_\_\_\_  
(street address)  
\_\_\_\_\_  
(city, township, or village) \_\_\_\_\_ (state) \_\_\_\_\_ (zip code)

(c.) The name and address of a statutory agent for service of process in Ohio is as follows:

\_\_\_\_\_  
(name) \_\_\_\_\_ (street and number)  
\_\_\_\_\_, Ohio \_\_\_\_\_  
(city, village or township) \_\_\_\_\_ (zip code)

(d.) Please indicate the state or jurisdiction in which the Foreign Limited Liability Partnership has been formed

(e.) The business which the partnership engages in is:

The undersigned constituent entities have caused this certificate of merger to be signed by its duly authorized officers, partners and representatives on the date(s) stated below.

\_\_\_\_\_  
ARB Automation Inc.  
(street name of entity)

By: Katherine M. Staley  
Res. Assistant Secretary  
Date: 12-1-01

\_\_\_\_\_  
ARB DE Inc. (ARB Inc.)  
(street name of entity)

By: [Signature]  
Res. Vice President  
Date: 12-1-01